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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/007,134	12/04/2001	Catherine M. Payne	60937-123-US	3734
24341	7590	12/08/2005	EXAMINER	
MORGAN, LEWIS & BOCKIUS, LLP. 2 PALO ALTO SQUARE 3000 EL CAMINO REAL PALO ALTO, CA 94306			MALDONADO, JULIO J	
			ART UNIT	PAPER NUMBER
			2823	

DATE MAILED: 12/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/007,134	PEYNE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Julio J. Maldonado	2823	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 November 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 46-55 and 58-69 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 46-49, 52-55 and 58-60, 63-66, 68 and 69 is/are rejected.
- 7) ☒ Claim(s) 50,51,61,62 and 67 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

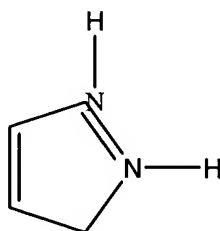
## DETAILED ACTION

### *Allowable Subject Matter*

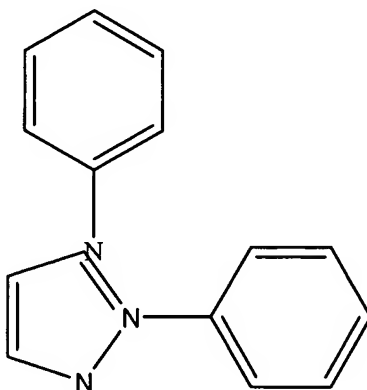
1. The indicated allowability of claims 46-55 and 58-69 is withdrawn in view of the newly discovered reference(s) to Skee to U.S. 6,465,403 B1. Rejections based on the newly cited reference(s) follow.

### *Claim Objections*

2. Claims 50, 51, 61, 62 and 67 are objected to because of the following informalities: In reference to claims 50, 61 and 66, applicants claim corrosion inhibiting compound having the following formula:



Furthermore, in reference to claims 51, 62 and 67, applicants claim a corrosion compound having the following formula:



However, nitrogen is only capable of forming three bonds instead of 4 as claimed by the applicants. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 46, 48, 54, 55 are rejected under 35 U.S.C. 102(e) as being anticipated by Skee (U.S. 6,465,403 B1).

In reference to claims 46 and 48, Skee teaches a cleaning composition for semiconductor substrates including silicon, silicon oxide and copper, the composition including choline hydroxide; hydroxylamine or hydroxylamine salts; water; and an organic solvent selected from a group that includes dimethyl sulfoxide (column 6, lines

17 – 49, column 7, line 35 – column 8, line 18, column 10, lines 25 – 53, column 11, lines 10 – 21 and column 15, lines 54 – 62).

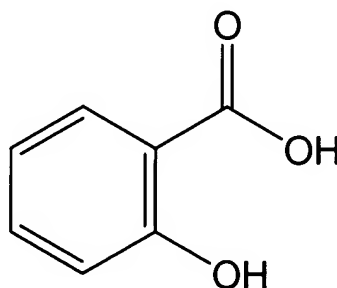
***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

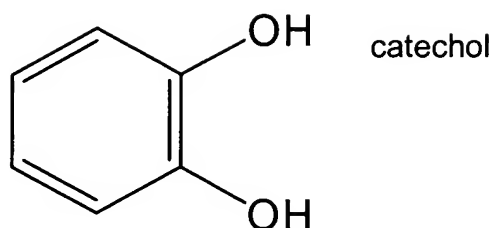
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 47, 49, 52, 53, 58-60, 63-65, 68 and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Skee (U.S. 6,465,403 B1) in view of the following arguments.

Skee teaches a cleaning composition for semiconductor substrates including silicon, silicon oxide and copper, the composition including enough choline hydroxide to achieve a pH of about 11 to about 13; about 1% to about 30% of hydroxylamine or hydroxylamine salts; about 0.1% to about 80% of organic solvent selected from a group that includes dimethyl sulfoxide; and water (column 6, lines 17 – 49, column 7, line 35 – column 8, line 18, column 10, lines 25 – 53, column 11, lines 10 – 21 and column 15, lines 54 – 62). Furthermore, Skee teaches adding from about 0.01% to about 10% of a chelating agent such as catechol and salicylic acid, which are hydroxybenzene compounds having the following formula:

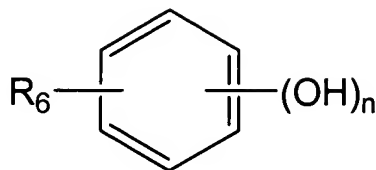


salicylic acid



Skee fails to teach wherein the composition consists essentially of about 10 percent by weight to about 50 percent by weight of the choline compound. However, the selection of the recited concentration is obvious because it is a matter of determining optimum process condition by routine experimentation with a limited number of species to obtain a desired pH level. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the above-mentioned concentration to arrive at the claimed invention

Still, Skee fails to teach wherein the composition consists essentially of about 10% by weight to about 80% by weight of water; from about 20% by weight to about 80% by weight of the organic solvent and about 0.5% by weight to about 5% by weight of an hydroxybenzene of the general class:



However, in the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. MPEP 2144.05. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the concentration ranges disclosed in Skee to arrive at the claimed invention.

### ***Response to Arguments***

7. Applicant's arguments with respect to claims 46-55 and 58-69 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

8. Applicants are encouraged, where appropriate, to check Patent Application Information Retrieval (PAIR) (<http://portal.uspto.gov/external/portal/pair>) which provides applicants direct secure access to their own patent application status information, as well as to general patent information publicly available.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Julio J. Maldonado whose telephone number is (571) 272-1864. The examiner can normally be reached on Monday through Friday.

10. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Smith, can be reached on (571) 272-1907. The fax number for this


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group is 571-273-8300. Updates can be found at  
<http://www.uspto.gov/web/info/2800.htm>.

Julio J. Maldonado  
December 01, 2005

Julio J. Maldonado  
Patent Examiner  
Art Unit 2823



George Fourson  
Primary Examiner